

6/26/08

MEMORANDUM

Tony
Good job!
O.k. to prepare
pre-notice draft
permit and fact sheet.
Peder

To: Peder Hansen

From: Tony Hummel

AEH

Re: Evaluation Memo -- Pinnacle Foods Corporation
NPDES Permit No. DE 0000736

Date: June 26, 2008

Pinnacle Foods Corporation (formerly Vlastic Foods International) has applied for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge treated sanitary waste water, industrial process waste water, and storm water to Whartons Branch, a tributary of Iron Branch and Indian River. The effective date for the current permit was December 1, 2000 and the expiration date is November 30, 2005. The permit was modified on May 22, 2001, to reflect the change in plant ownership from Vlastic Foods International to Pinnacle Foods Corporation. The renewal application was received on May 31, 2005.

This facility is located on County Road 331, southeast of Millsboro, Sussex County, Delaware. The facility is a pickling plant that processes and packages pickles and peppers.

At the time of the last permit renewal, one waste water discharge point (Outfall 001) and eight storm water outfalls (Outfalls 002 through 009) were present at the site. Outfall 001 consists of process waste water, sanitary waste water, and cooling water. Effluent limits established for Outfall 001 were Flow, pH, BOD₅, TSS, Total Phosphorus, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, and Enterococcus. Outfalls 002 through 009 consist of storm water run-off from roof tops, loading and storage areas, and parking areas on the site. Monitoring of Outfall 004 for Flow, Chlorides, BOD₅, TSS, Enterococcus, Ammonia, and pH was required every other year.

Receiving Stream Classification:

Whartons Branch is a fresh water body that is tidally influenced by the brackish water of Indian River. The designated uses for Indian River in the area of the discharge are: industrial water supply; primary contact recreation; secondary contact recreation; and

maintenance of fish, aquatic life, and wildlife. The marine water segments (tidal portion) of Indian River are designated as waters of exceptional recreational or ecological significance (ERES). The Department adopted Total Maximum Daily Loads (TMDL) Regulation for nutrients for the Indian River, Indian River Bay, and Rehoboth Bay in December 1998. The TMDL for the Inland Bays requires systematic elimination of point source nutrient discharges. The Department also adopted TMDL Regulation for bacteria for the Indian River, Indian River Bay, and Rehoboth Bay in December 2006. The TMDL regulation contains waste load allocations for all point source discharges for enterococcus.

Site Inspection:

On June 9, 2008, Allen McCloskey and I met with Robert Lynch at the site to review current site operations and conditions and discuss permit renewal issues. The operation of the plant was observed and all systems appeared to be working adequately. The permittee has not made any significant process changes since the last permit issuance nor requested any changes to the permit.

Review of Monitoring Data and Discussion:

A review of DMR data indicates that the discharge from Outfall 001 has routinely met permit limits for all limited parameters for the full term of the current permit with only one minor exception. The enterococcus limit was exceeded once in May 2006. All effluent limitations and monitoring requirements for Outfall 001 are proposed to remain unchanged with two minor exceptions. The effluent limitations for BOD₅ are proposed to be tightened to align with Section 7.03.a. of the Delaware Regulations Governing the Control of Water Pollution. Effluent limitations for enterococcus are proposed to be revised to comply with current the TMDL Regulation as discussed below in the TMDL discussion section.

Storm water monitoring results for Outfall 004 were within reasonable ranges for applicable Benchmark Concentration Values. Outfall 004 should continue to be monitored for flow, TSS, BOD₅, chloride, enterococcus, and ammonia nitrogen during the first, third, and fifth year of the permit, based on the requirements of Section 9.1 of the Water Quality Regulations and the nature of facility operations.

TMDL Discussion:

Nutrients

The Department adopted Total Maximum Daily Loads (TMDL) Regulation for nutrients for the Indian River, Indian River Bay, and Rehoboth Bay in December 1998. The TMDL for

the Inland Bays requires systematic elimination of point source nutrient discharges. Due to the high salt content of the Vlastic effluent, disposal options are limited. Land application of the effluent is prohibited by DNREC land treatment regulations and other treatment options are not technically or economically feasible. Based on this information, total elimination of the nutrient discharge from the Vlastic facility is not practical. As an alternative to total elimination of the nutrient discharge, the nutrient limits in the current permit were reduced by 50% from previous permitted levels, and the remaining nutrients were proposed to be offset by reducing/eliminating non-point source nutrient loads in the watershed. The nutrient reduction and offset plans were implemented during the term of the current permit and are summarized below:

Nutrient Reduction Plan

The current permit limits for total phosphorus (TP) and ammonia nitrogen (NH_3) represented a 50% reduction from the permit load limits in the previous permit. The TP load limits are currently set at 4 lbs/day daily average and 8.5 lbs/day daily maximum. The NH_3 load limits are currently set at 16.5 lbs/day daily average and 33.5 lbs/day daily maximum. A daily maximum concentration limit for NH_3 of 6.7 mg/L was also included in the current permit. Additional monitoring for nitrate nitrogen (NO_3), nitrite nitrogen (NO_2), and total kjeldahl nitrogen (TKN) was included in the current permit.

Nutrient Offset Plan

The current permit allowed the facility, as described above, to discharge up to a total of 6,023 lbs/yr of nitrogen and 1,460 lbs/yr of phosphorus. The facility was required to offset at least an equivalent amount of nitrogen and phosphorus by reducing/eliminating non-point source nutrient loads, as follows:

1. Corn production was eliminated on a 35 acre parcel adjacent to the facility. The parcel had been in constant corn production with nutrients being applied via spray irrigation of groundwater (State Permit No. 3016B/92) and application of the fertilizers required for corn production. Removing the parcel from corn production was intended to result in a net reduction of 5,495 lbs/yr of nitrogen and 1,225 lbs/yr of phosphorus.
2. Reed canary grass was planted in place of the corn crop on the adjacent 35 acre parcel. The reed canary grass removes nutrients from the soil and from the spray irrigation water, thus reducing the overall nutrient load to the watershed. The reed canary grass is harvested and utilized outside the

watershed. The reed canary grass nutrient removal system was intended to result in a net reduction of 1,950 lbs/yr of nitrogen and 420 lbs/yr of phosphorus.

3. The facility pumps approximately 169,836,000 MG/yr of groundwater for use in processing pickles. On average, this water contains approximately 6,164 lbs of nitrogen and 78 lbs of phosphorus. After processing and treatment in the on-site treatment plant, the water is discharged via Outfall 001 containing approximately 1,711 lbs of nitrogen and 196 lbs of phosphorus. Through the groundwater processing and treatment, the facility was intending to reduce the amount of nitrogen in the environment by 4,453 lbs/yr and increase the amount of phosphorus by 118 lbs/yr.

Through the implementation and maintenance of the above offset plan, the facility intended to offset approximately 11,898 lbs/yr of nitrogen and 1,527 lbs/yr of phosphorus. Data collected during the term of the permit (Attachment 3) indicates that the permittee is offsetting an average of 7442 lbs/yr of nitrogen and 1830 lbs/yr of phosphorus. The facility discharges through Outfall 001 an average of 3413 lbs/yr of nitrogen and 219 lbs/yr of phosphorus. The data indicate average offset to discharge ratios of 2.5 to 1 for nitrogen and 9.6 to 1 for phosphorus.

Monitoring requirements for the nutrient offset portion of this NPDES permit are conducted in accordance with the requirements contained in the existing land application permit (State Permit No. 3016B/92).

Based on the above discussion, the nutrient reduction and offset plans appear to be accomplishing the intended goal of offsetting the nutrient load to the watershed and should remain in effect for the proposed permit.

Bacteria

The Department also adopted TMDL Regulation for bacteria for the Indian River, Indian River Bay, and Rehoboth Bay in December 2006. The TMDL regulation contains waste load allocations (WLA) for all point source discharges for enterococcus of 33 CFU/100mL. The current permit limit for enterococcus was based on Section 11.6 of the State of Delaware Surface Water Quality Standards (SWQS), as amended, August 11, 1999. The current SWQS for enterococcus is 35 CFU/100 mL. The TMDL WLA for enterococcus should be implemented in the permit as an effluent limit as an average daily concentration.

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Recommendations:

Based on the above discussions, the permit should be renewed for five more years. Effluent limitations for BOD₅ should be tightened to align with Section 7.03.a. of the Delaware Regulations Governing the Control of Water Pollution. The TMDL WLA of 33 CFU/100mL for enterococcus should be implemented in the permit as an effluent limit as an average daily concentration. Requirements to maintain the Nutrient Offset Plan should be included in the permit to continue offsetting the nutrient load to the watershed.

If you have any questions, please let me know.

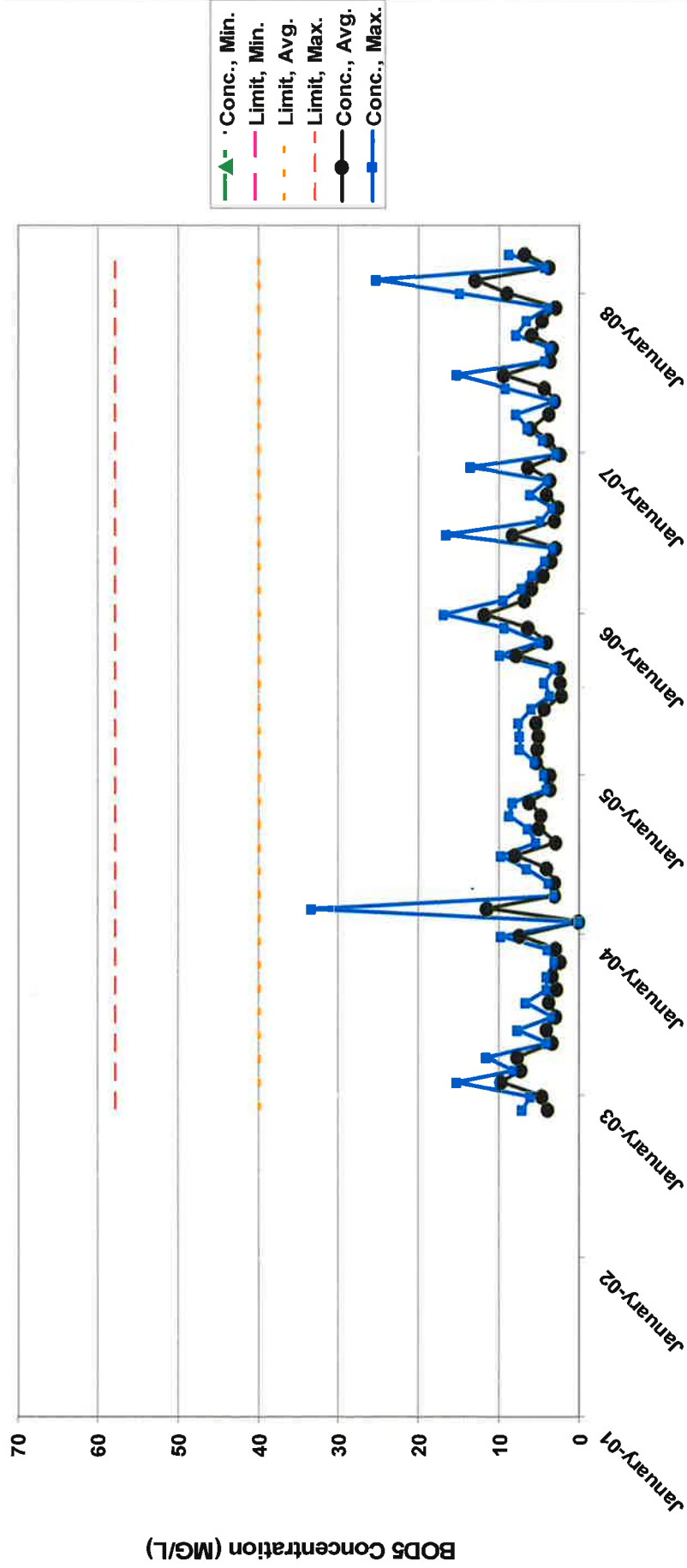
Attachments:

1. DMR Data
2. Water Quality Calculations
3. Nutrient Offset Plan Summary

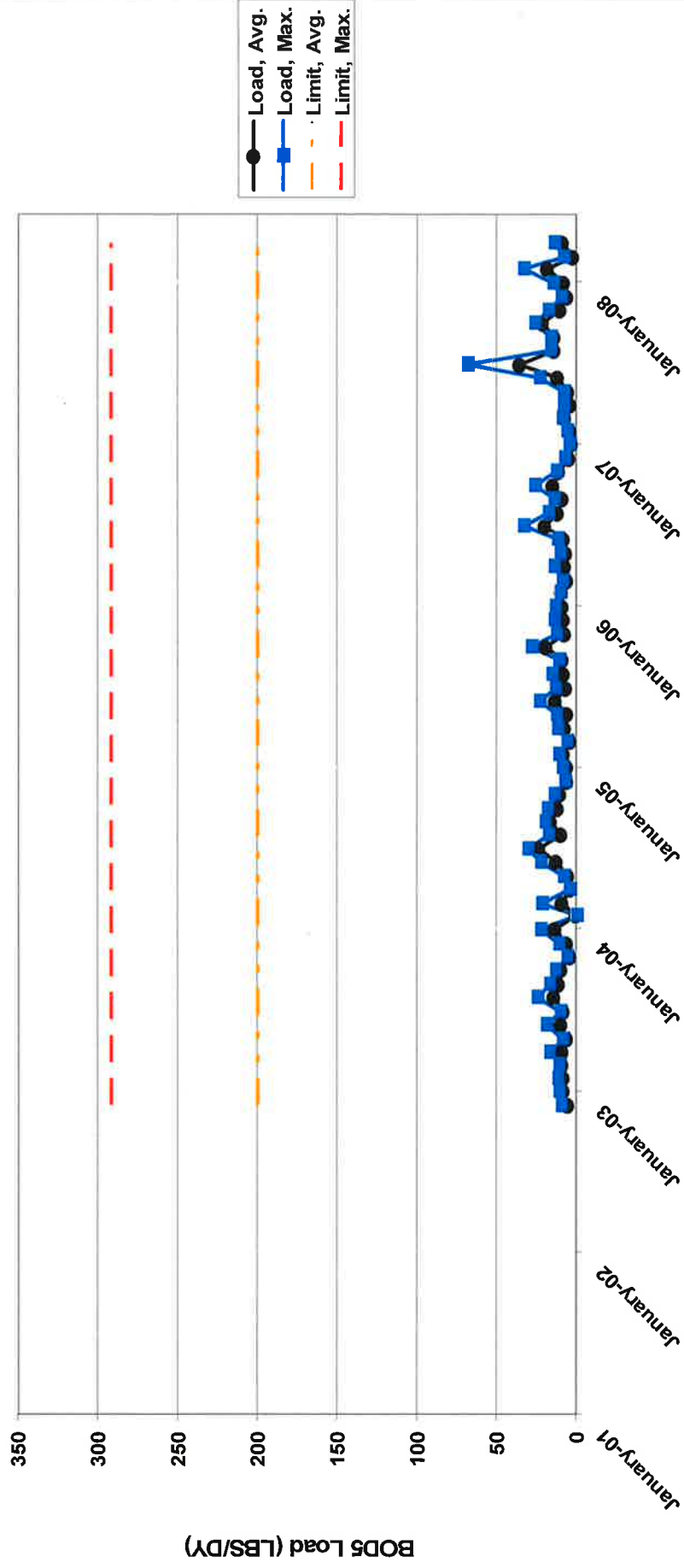
Attachment 1

DMR Data

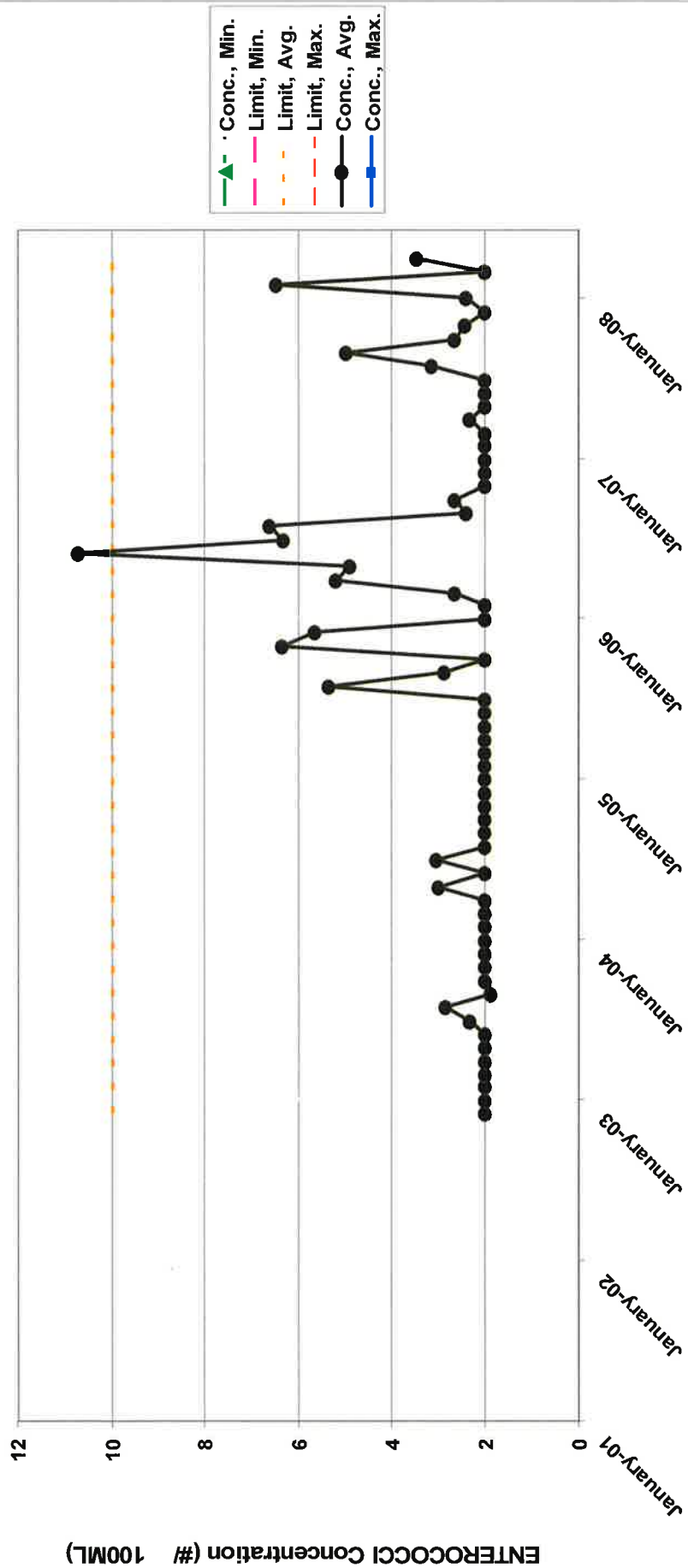
Pinnacle Foods Corporation, 001 (MLOC = Effluent Gross Value)



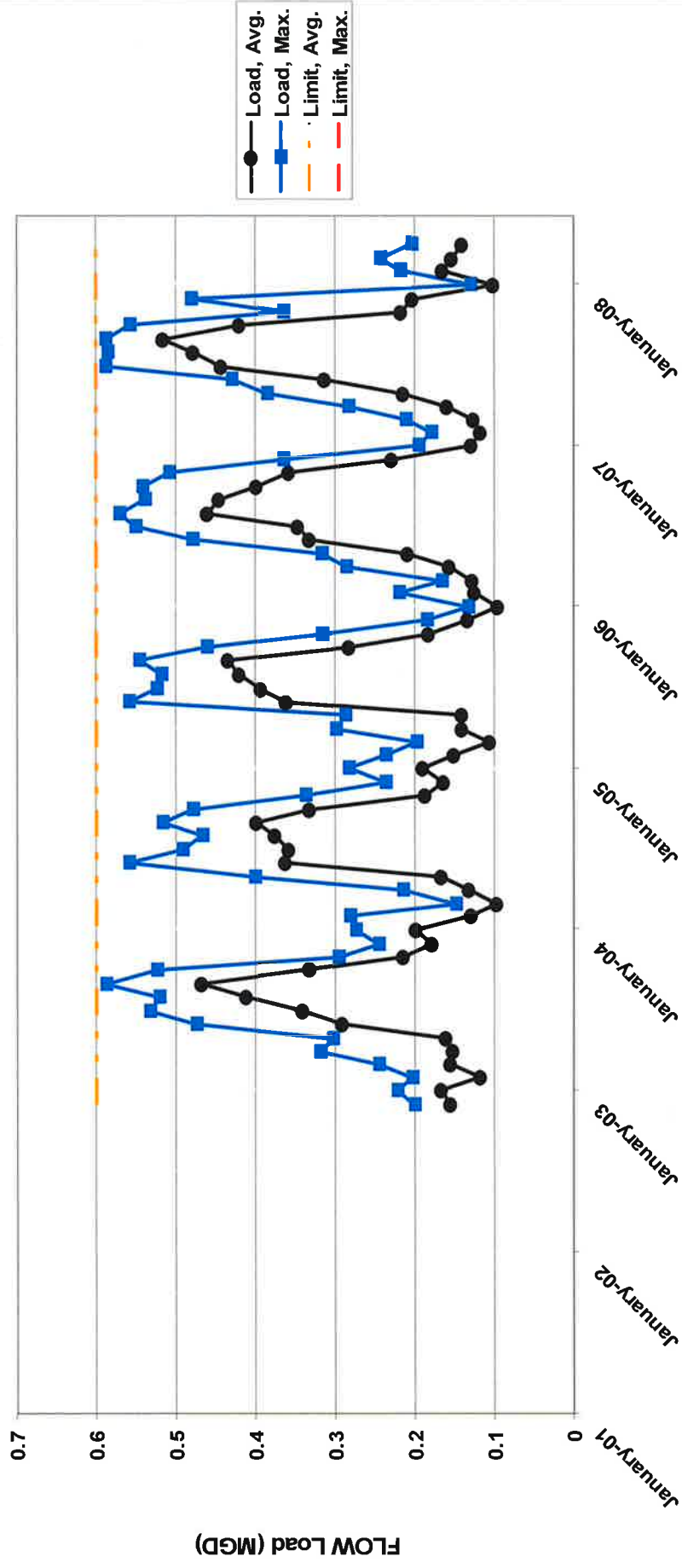
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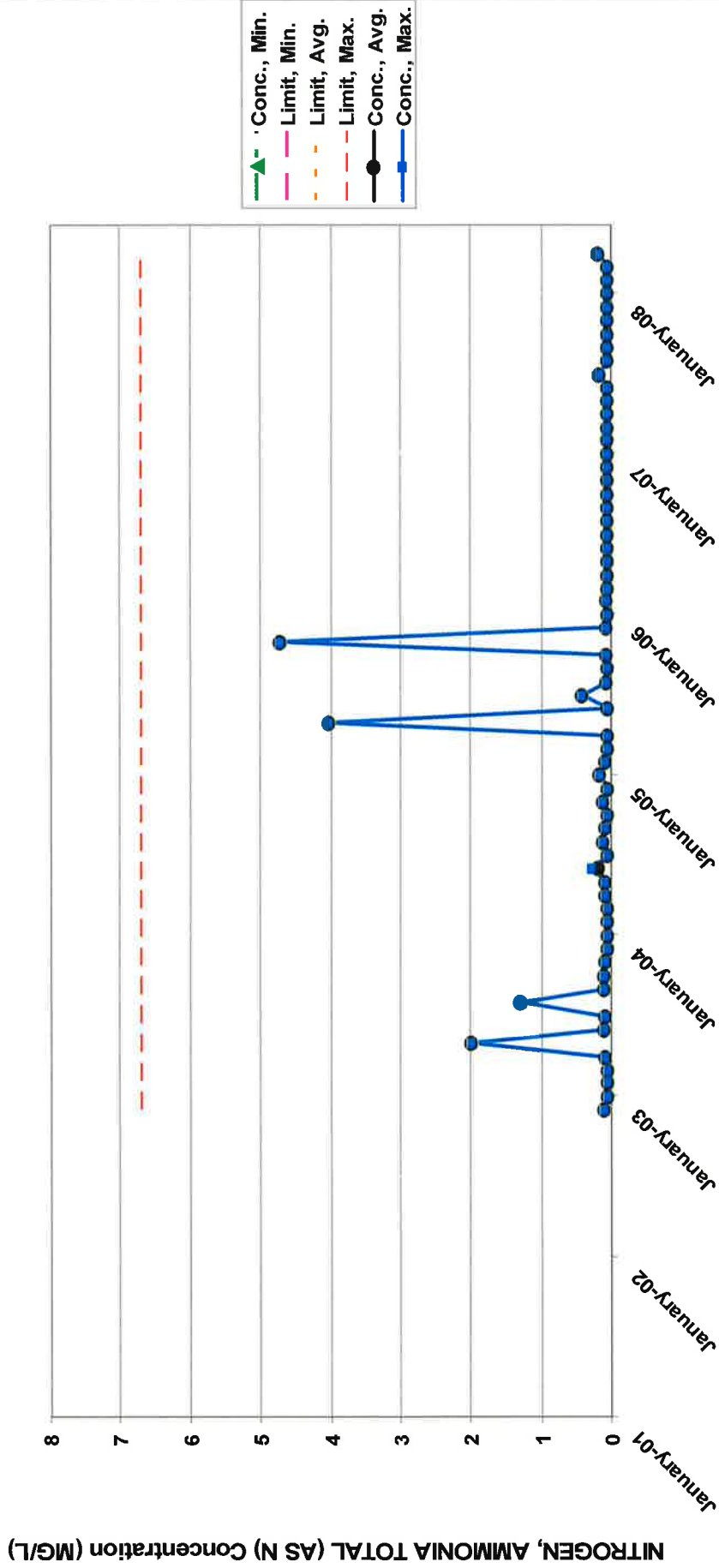
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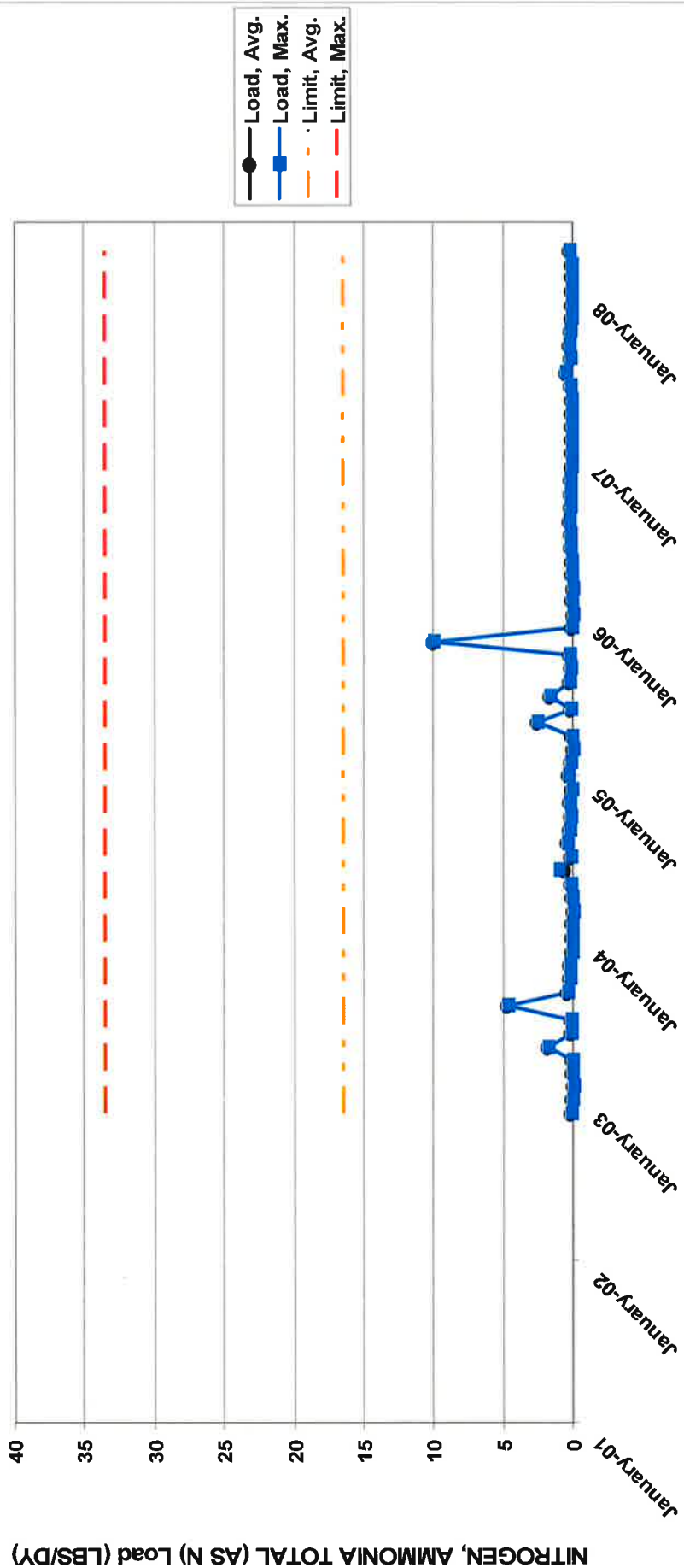
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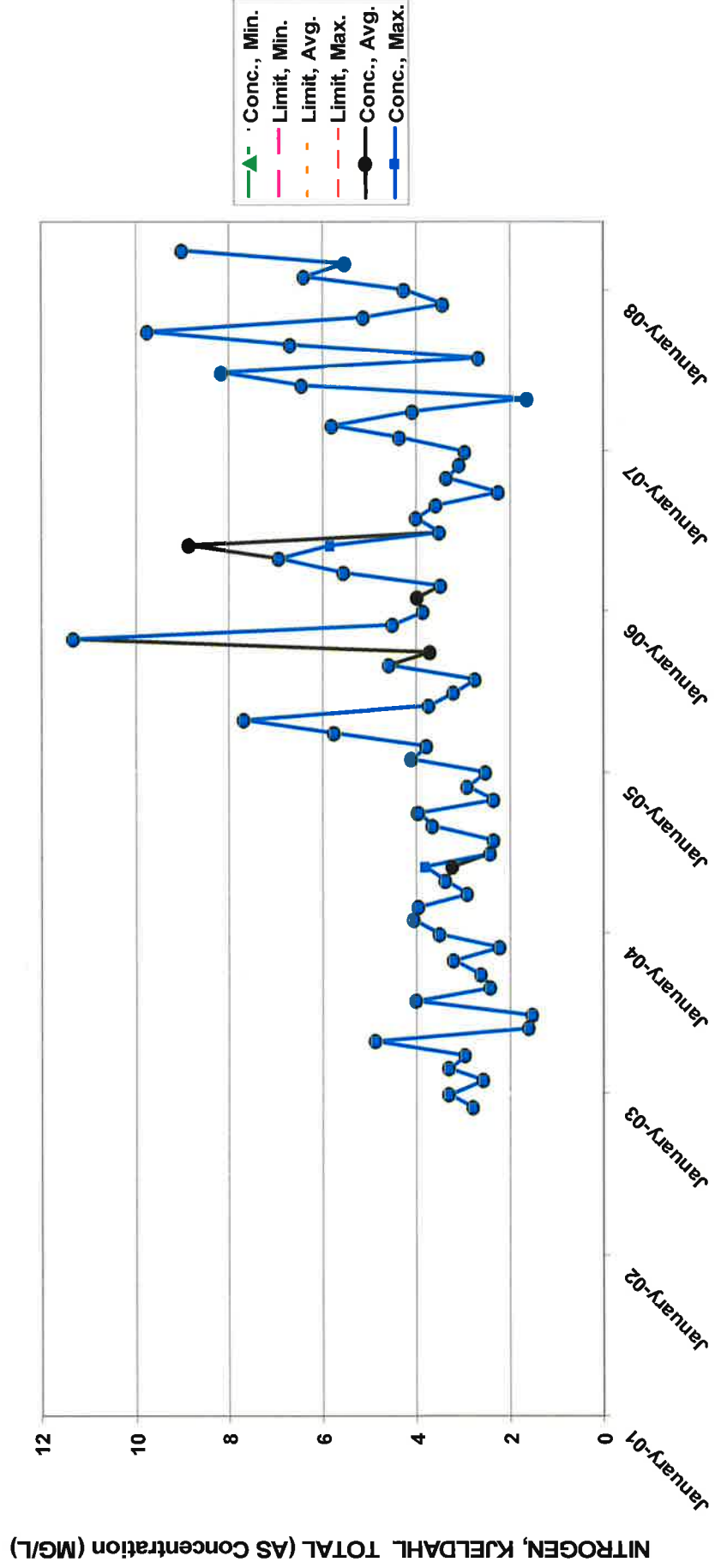
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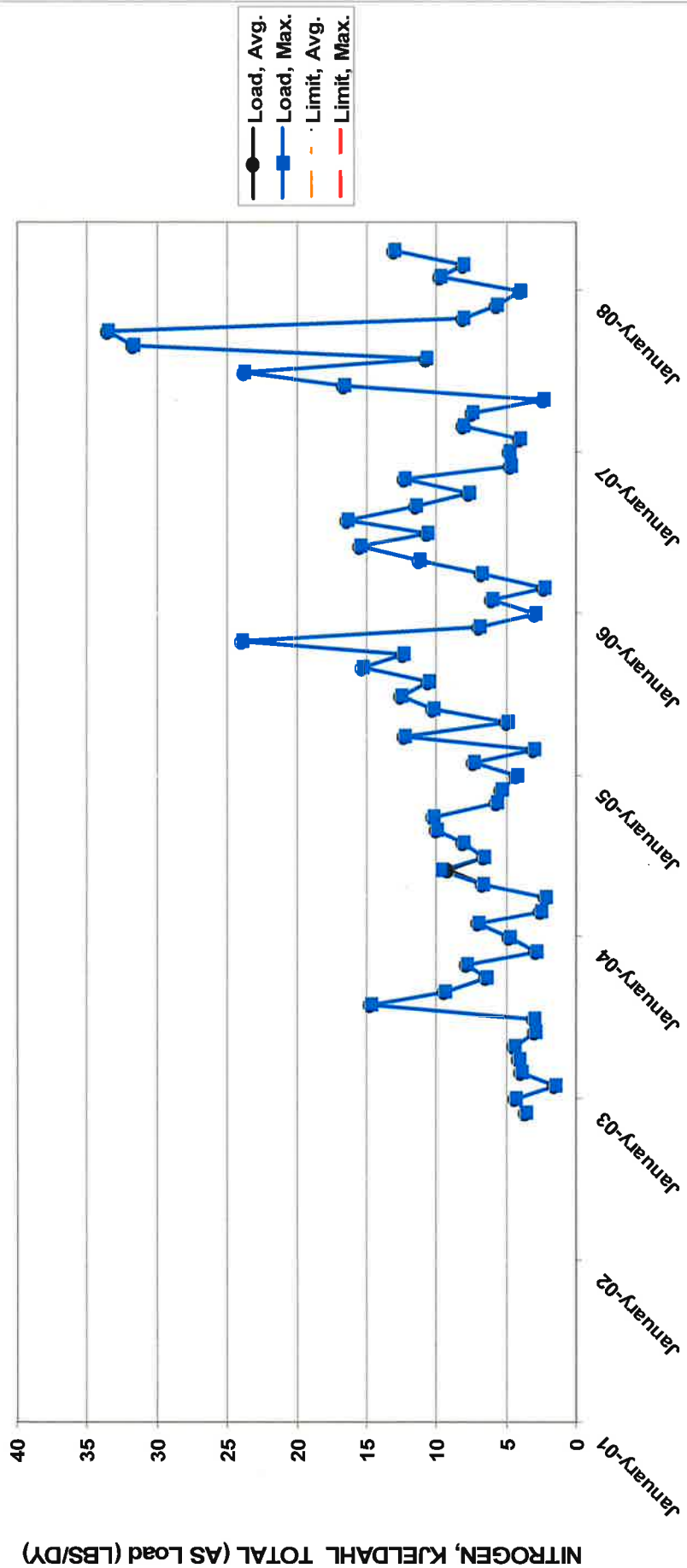
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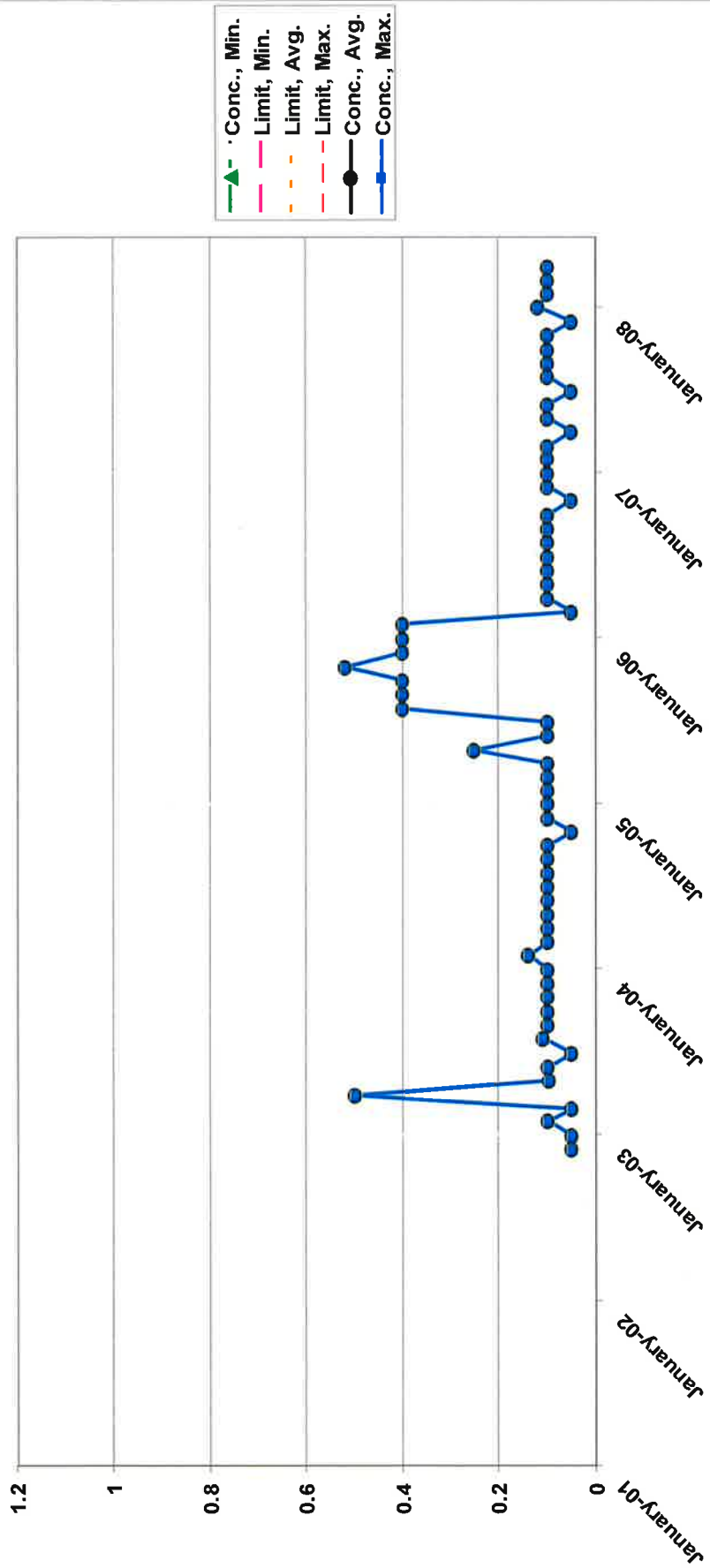
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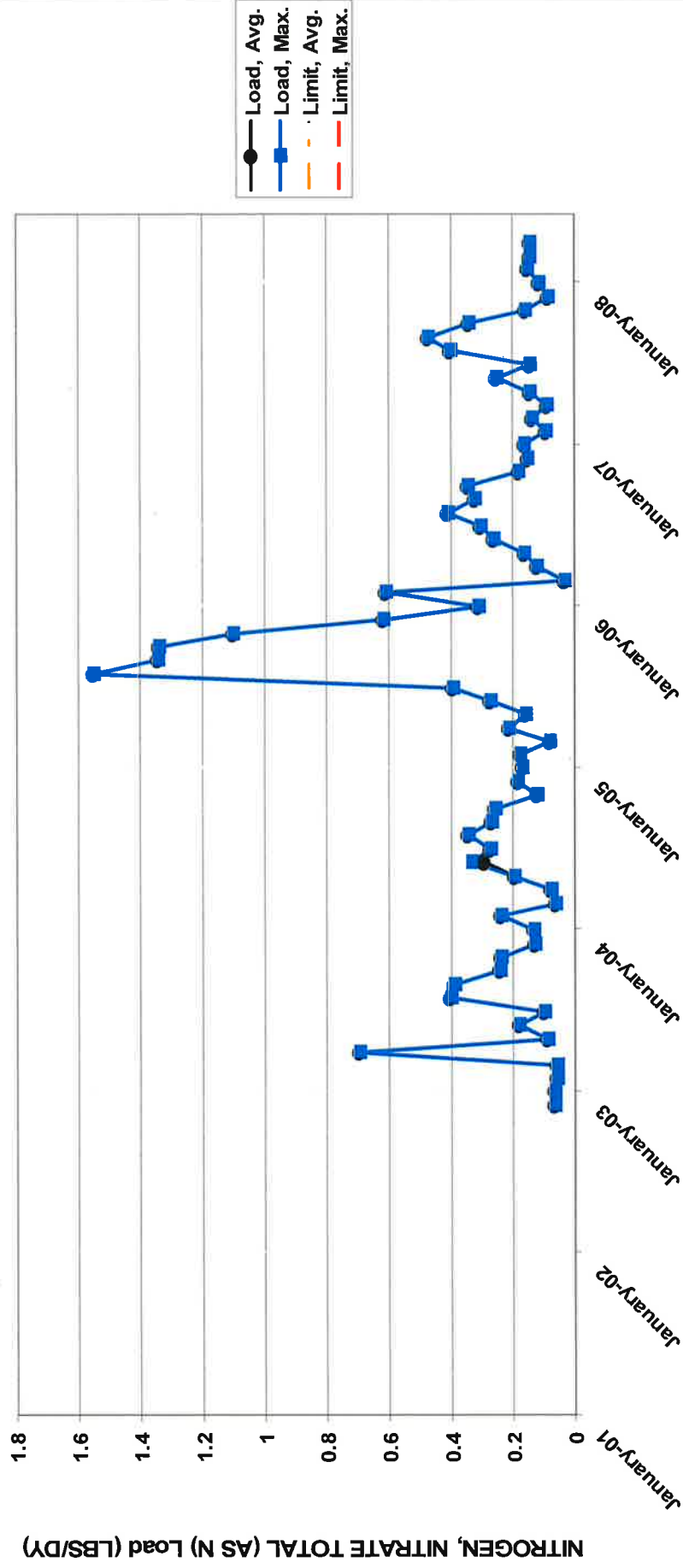
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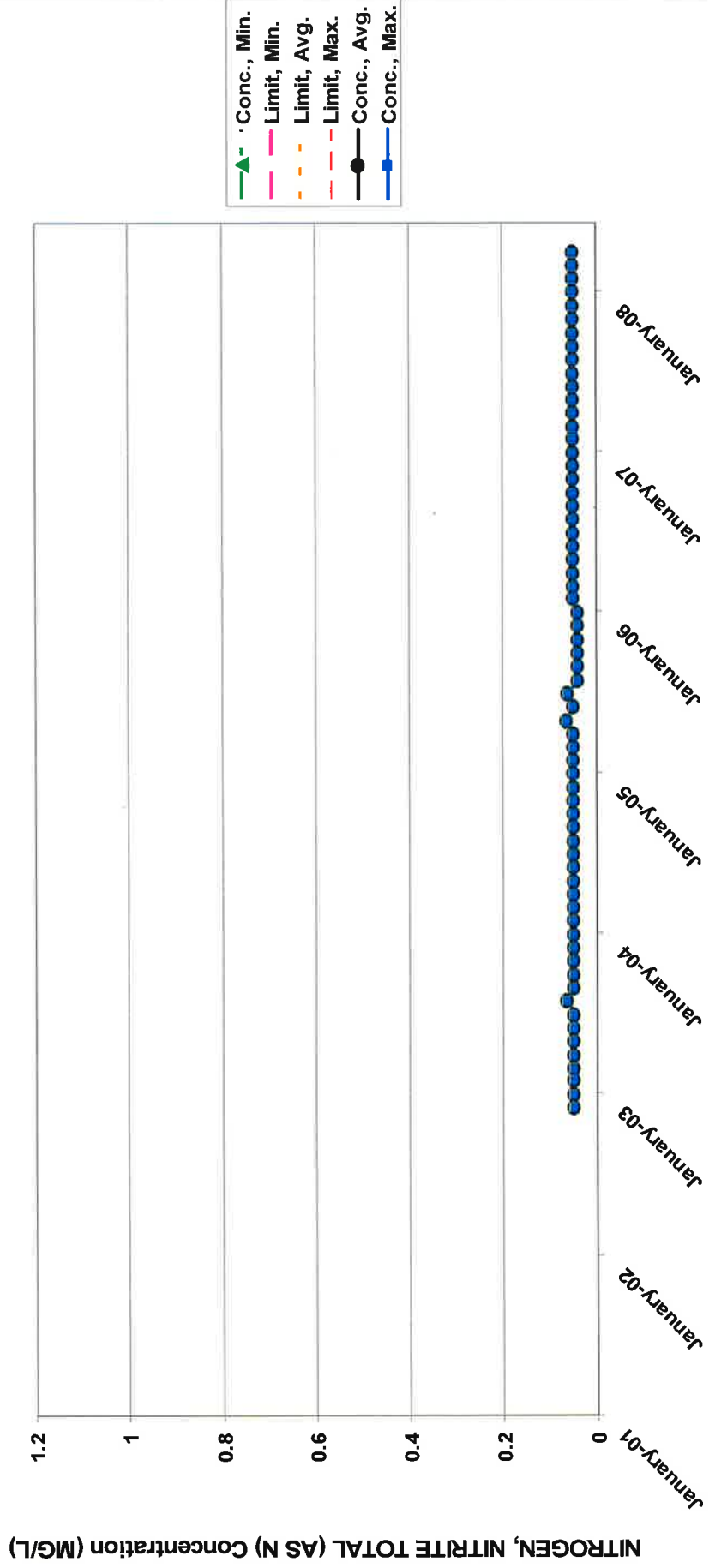
NITROGEN, NITRATE TOTAL (AS N) Concentration (MG/L)



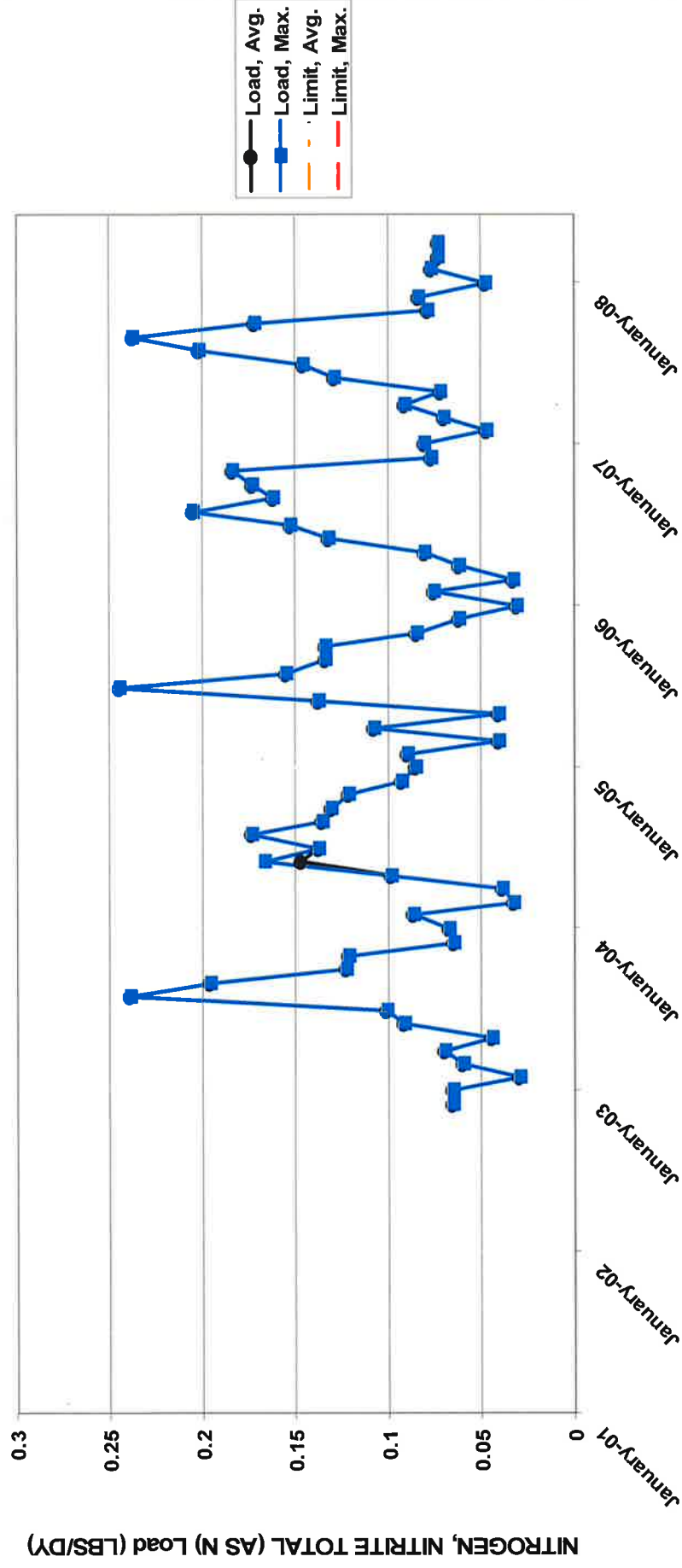
Pinnacle Foods Corporation, 001 (MLOC = Effluent Gross Value)



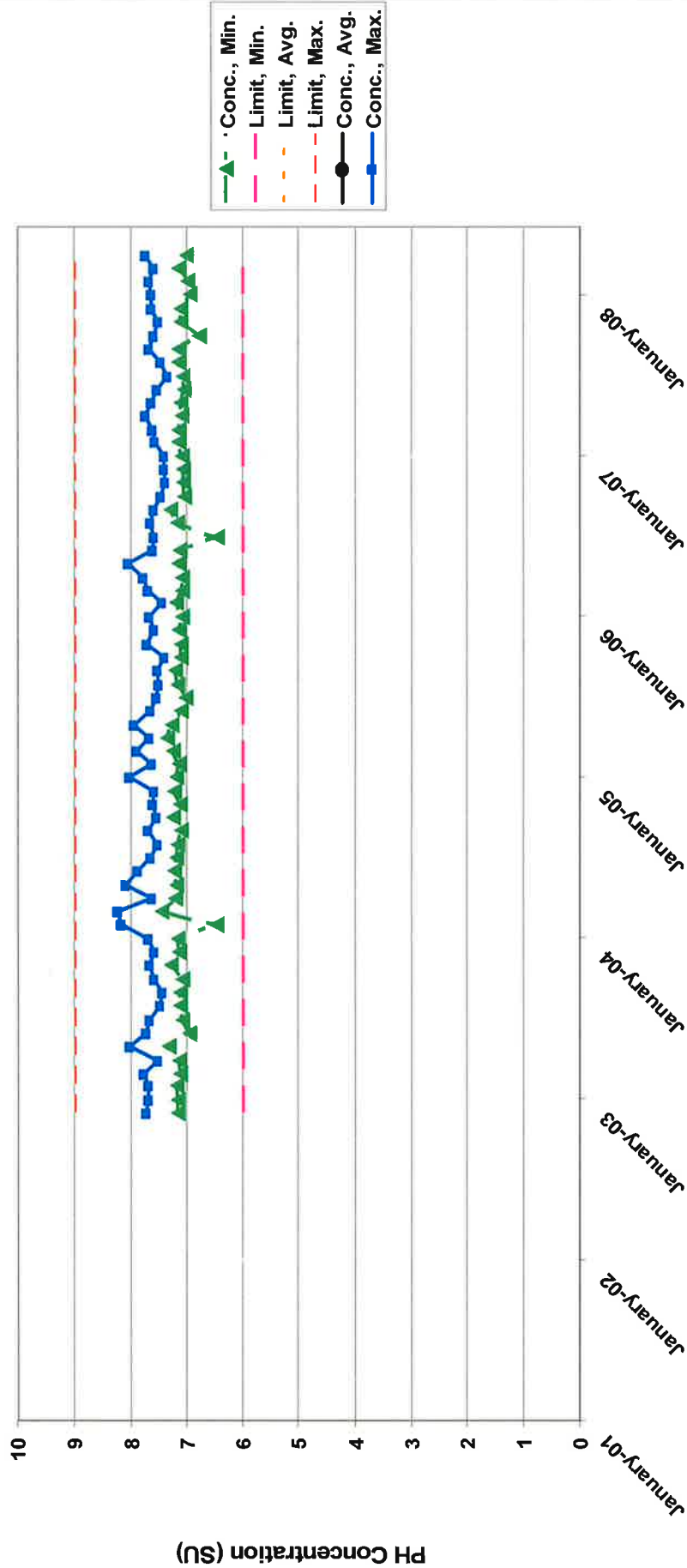
Pinnacle Foods Corporation, 001 (MLOC = Effluent Gross Value)



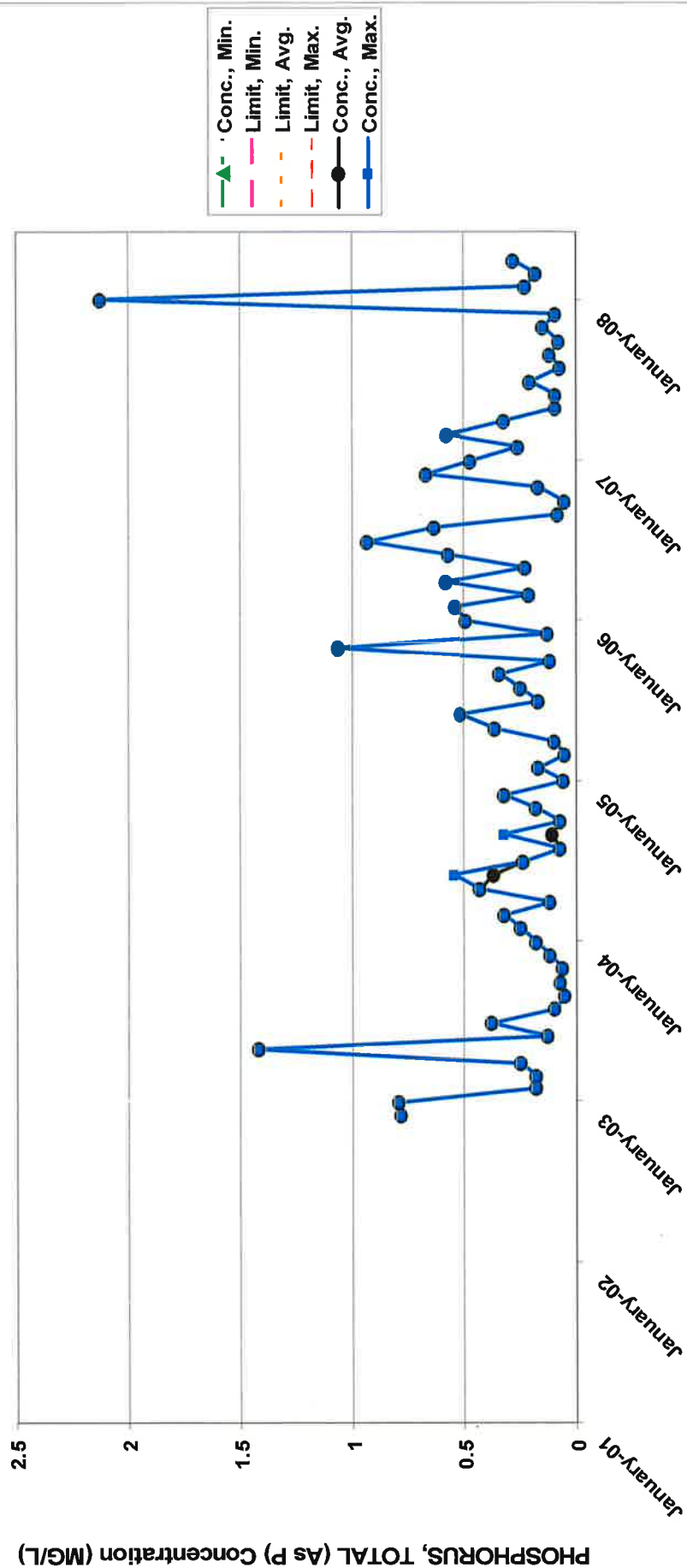
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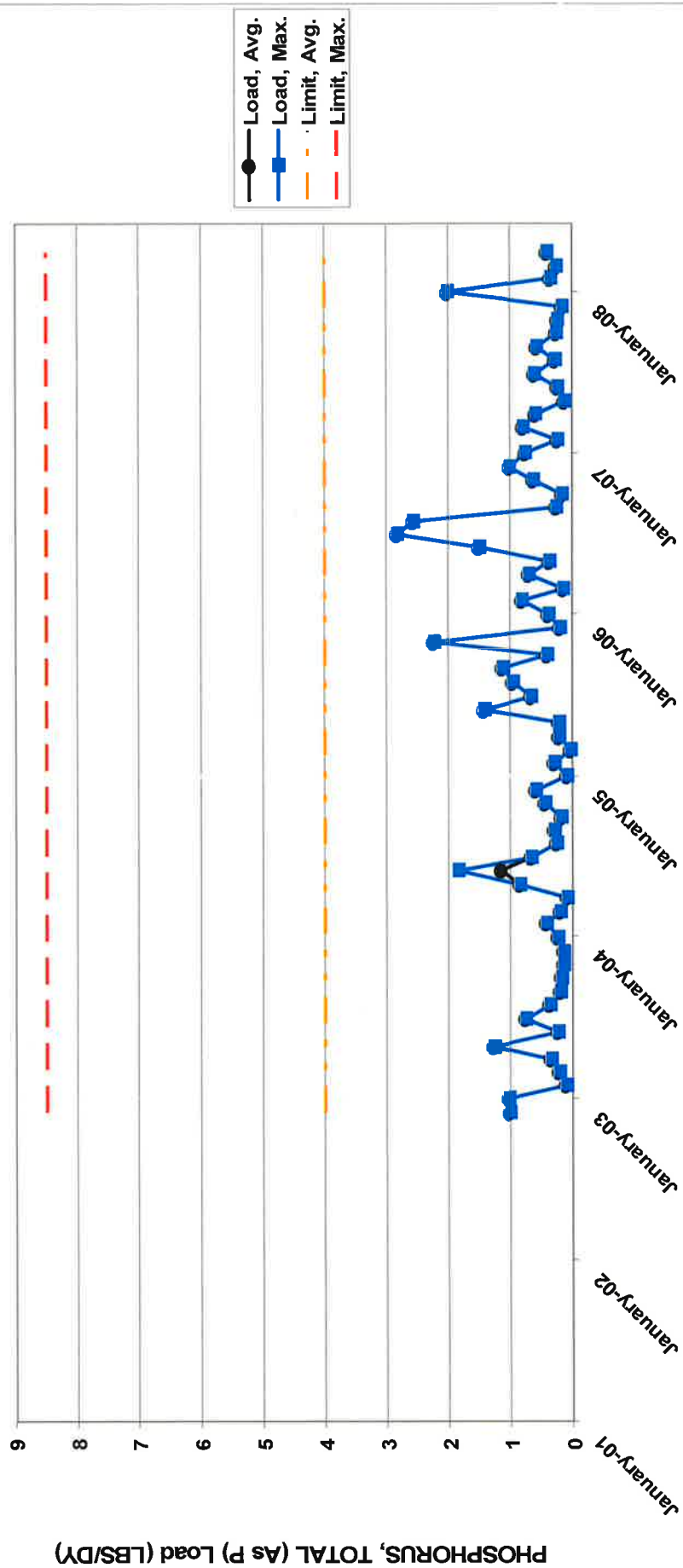
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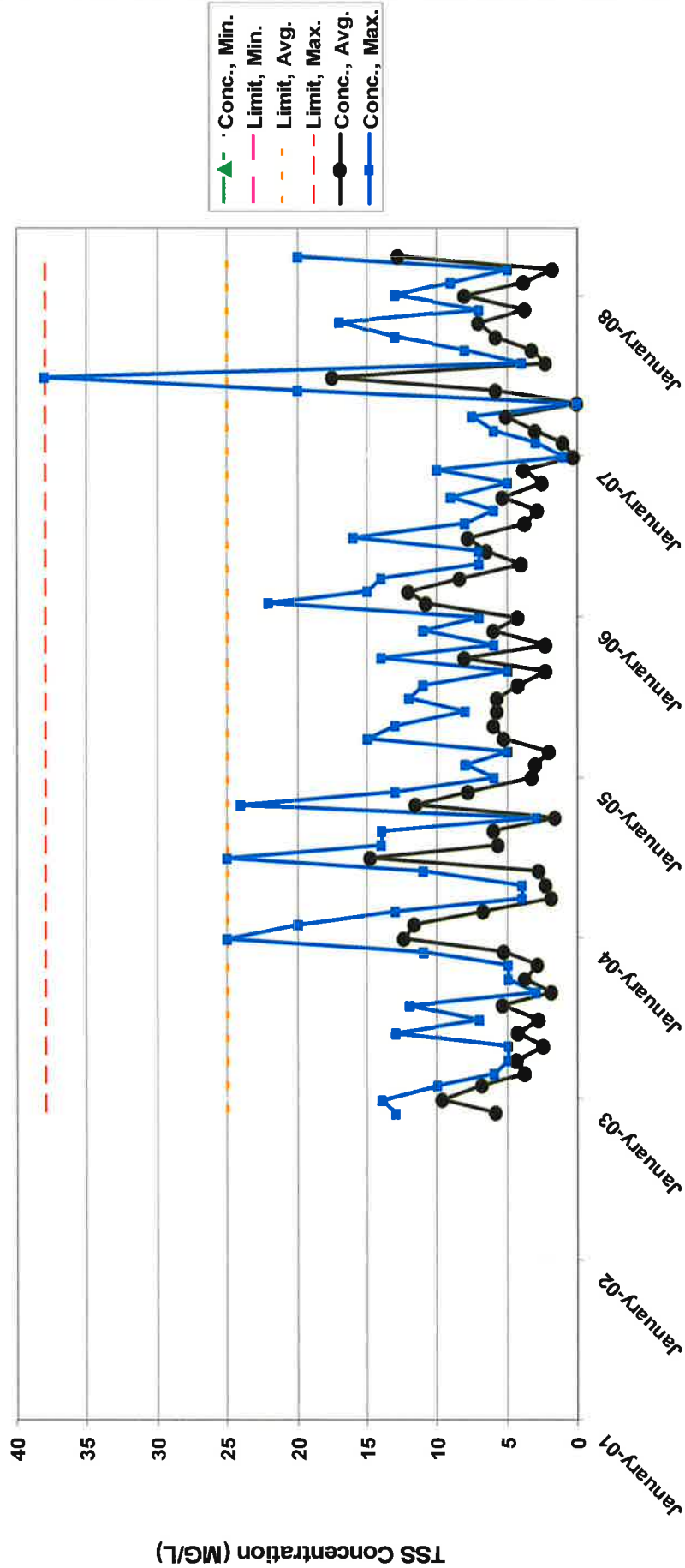
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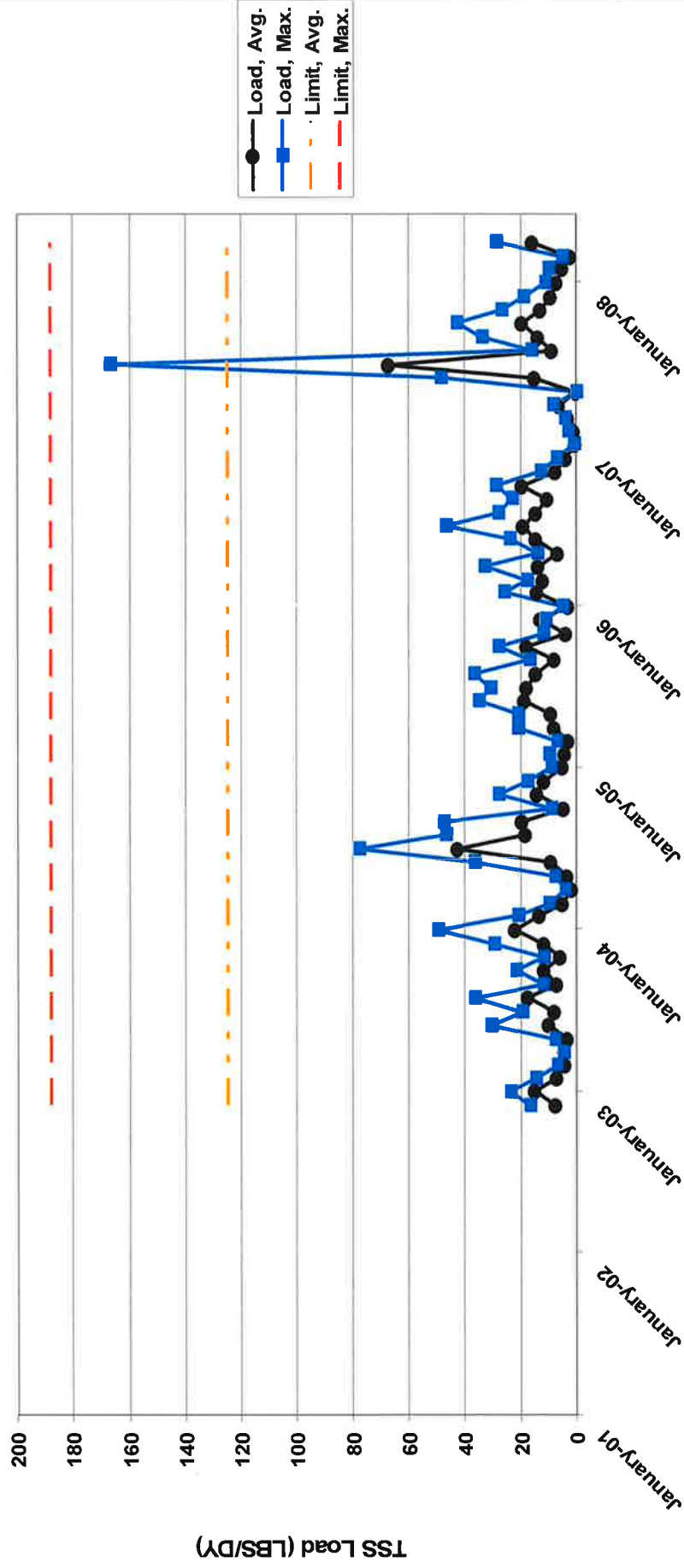
Pinnacle Foods Corporation, 001 (MLOC = Effluent Gross Value)



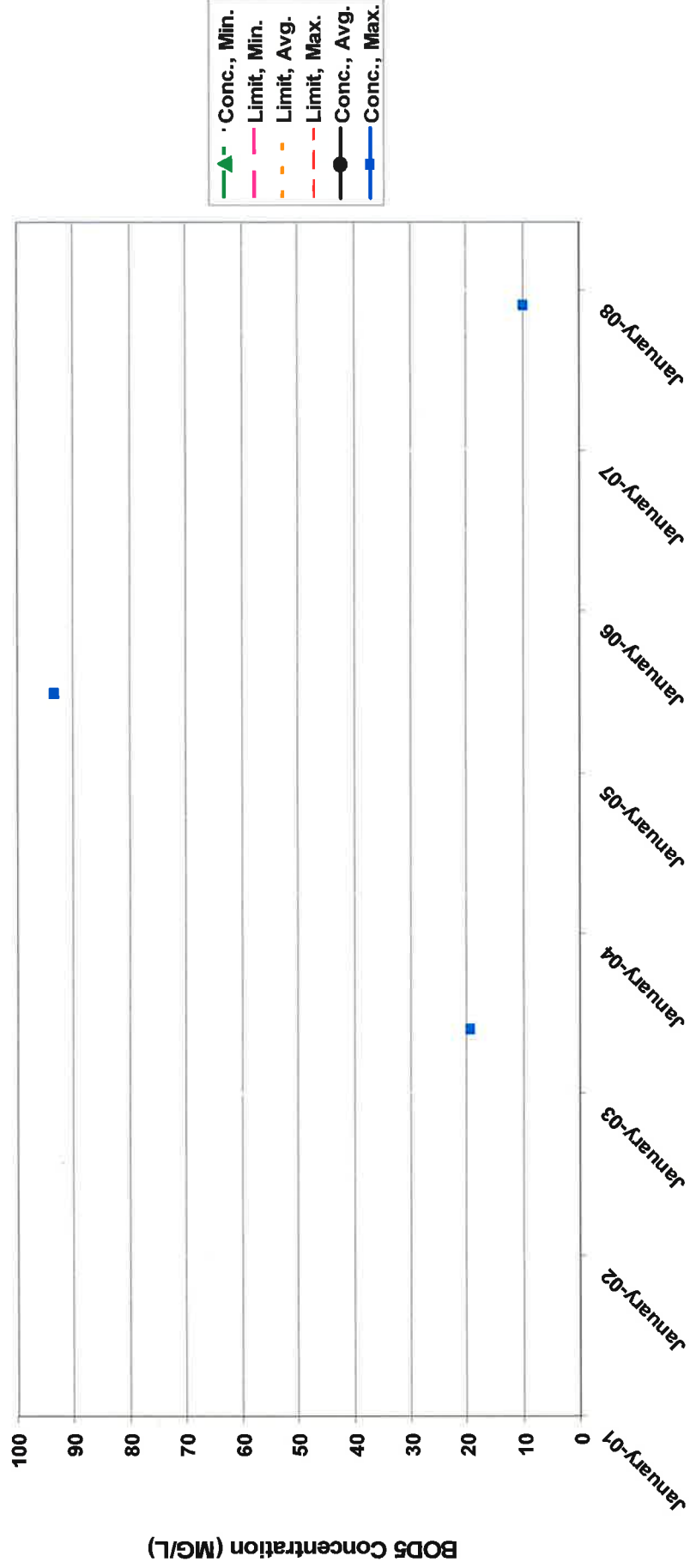
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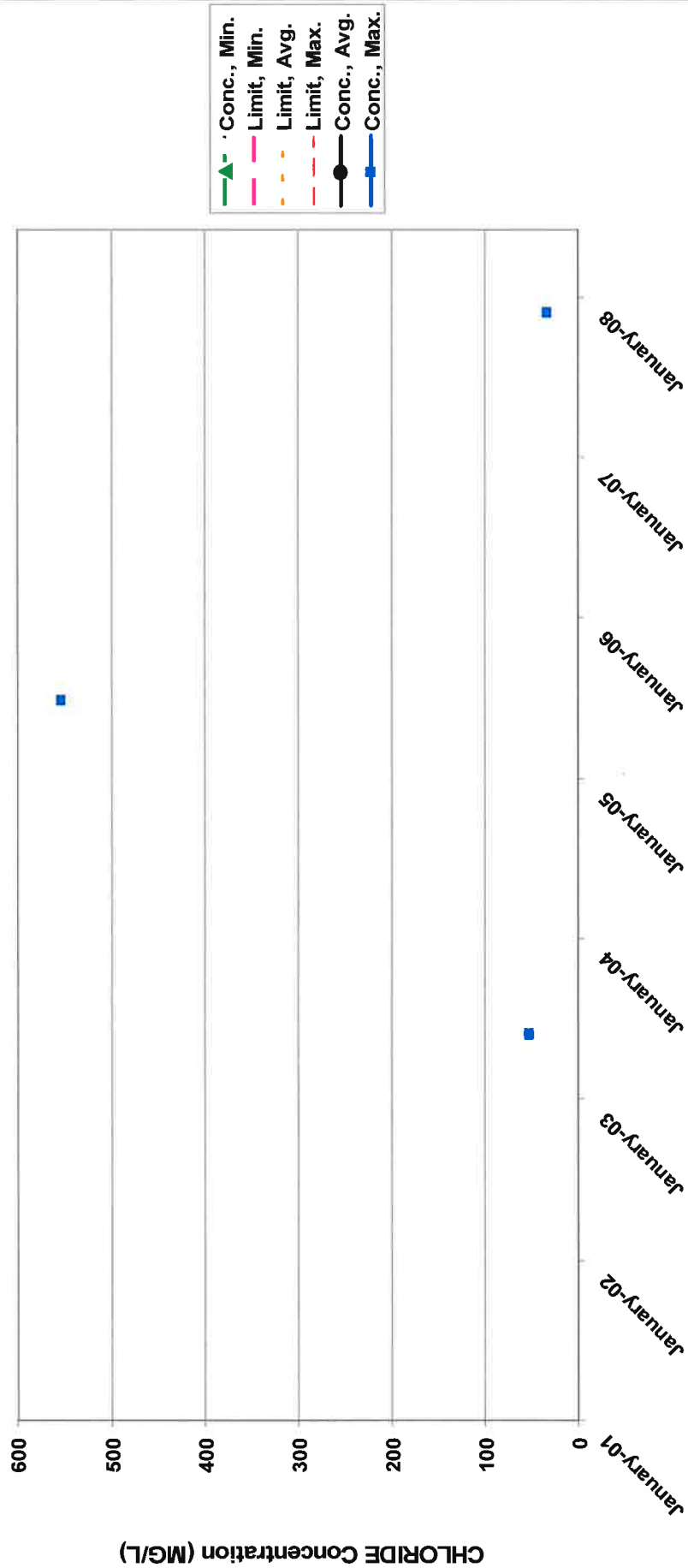
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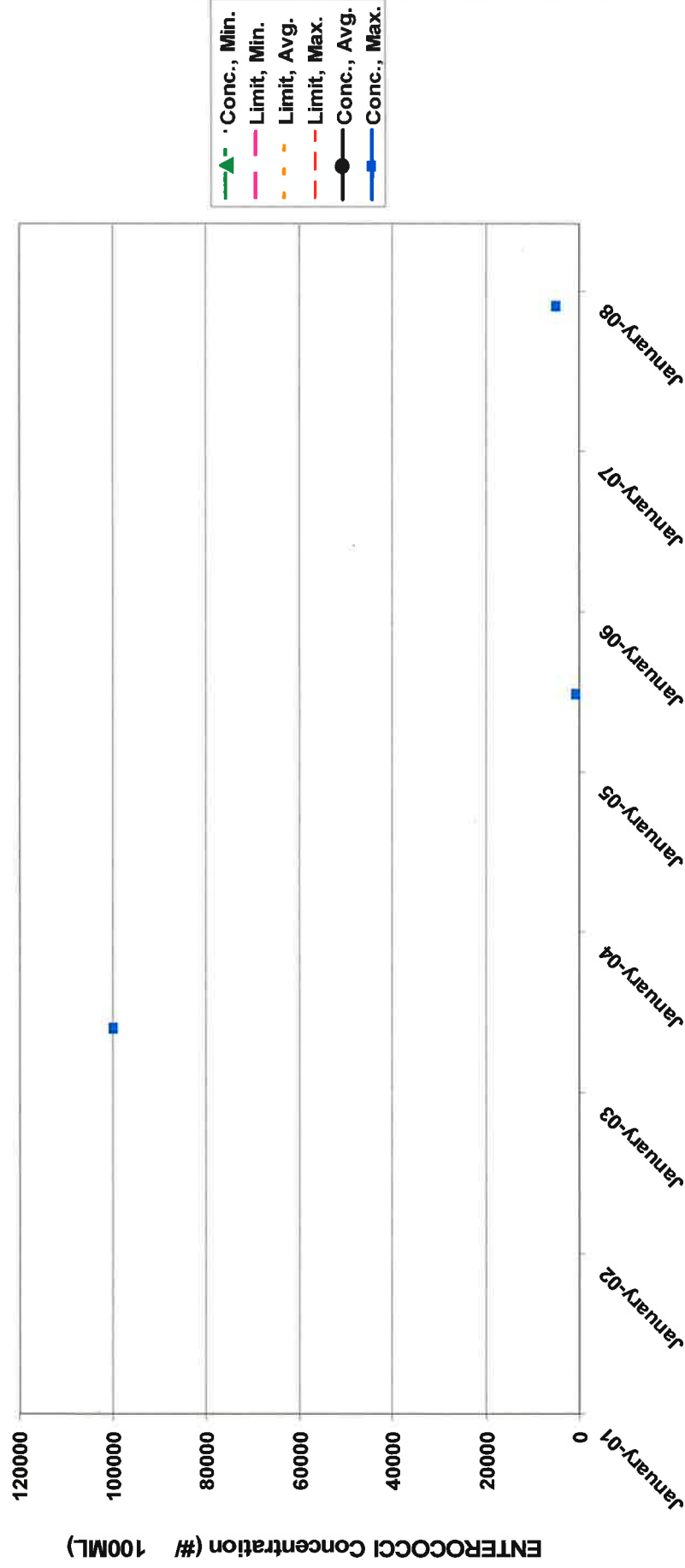
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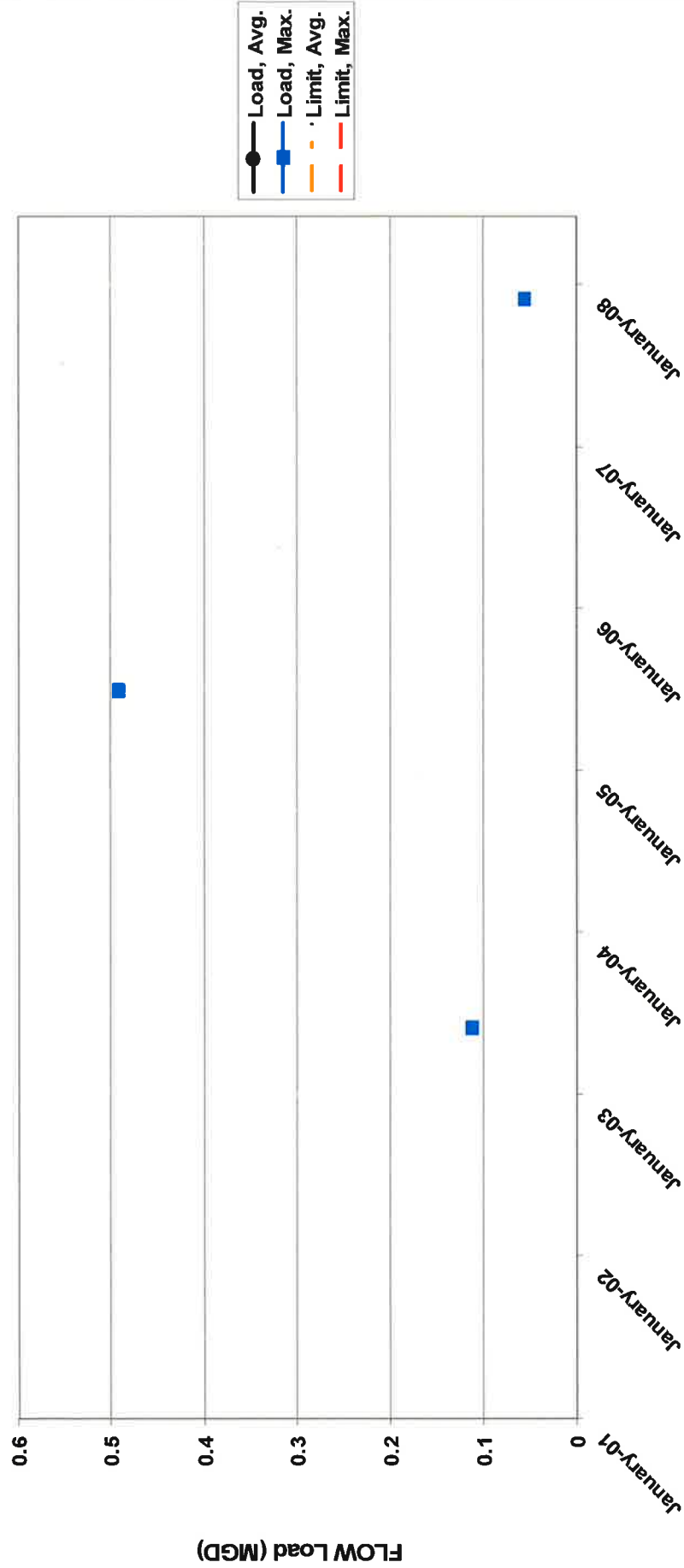
Pinnacle Foods Corporation, 004 (MLOC = Effluent Gross Value)



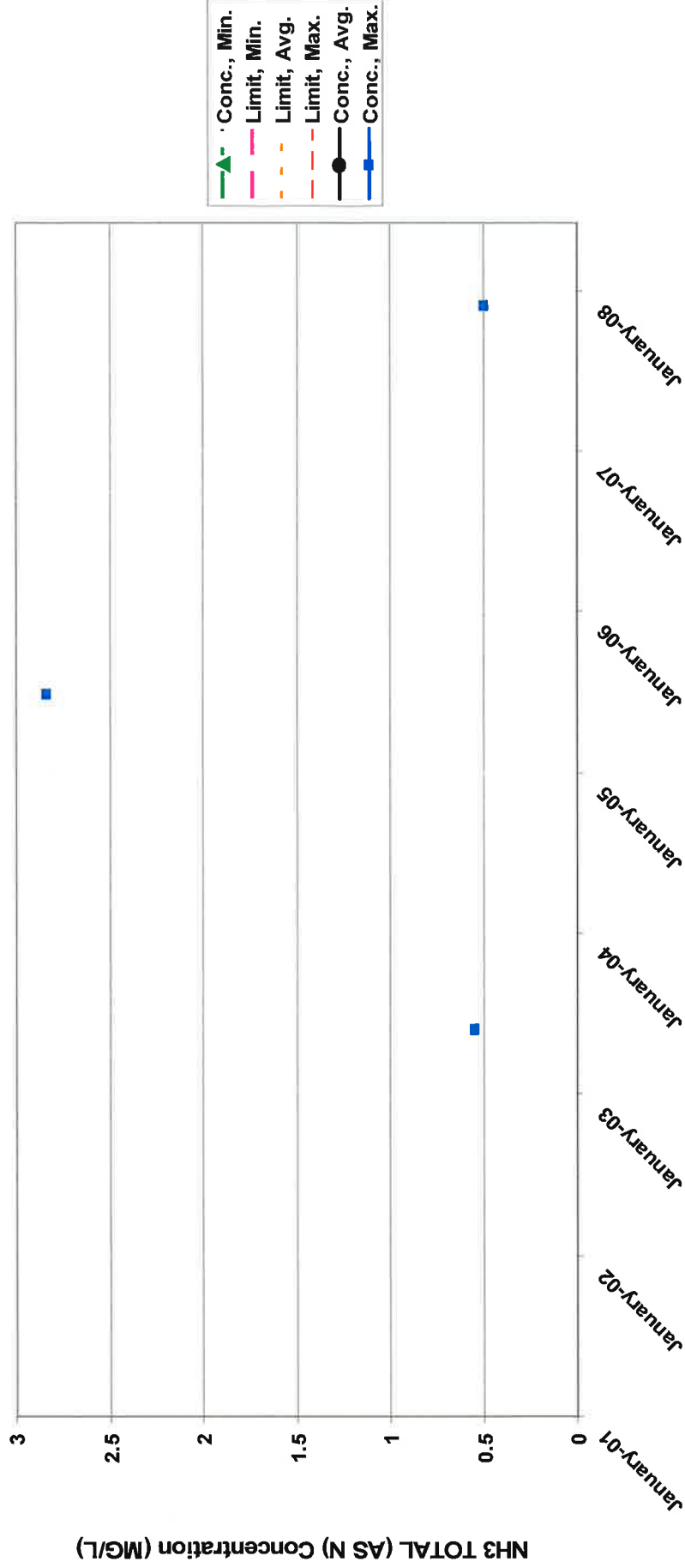
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